Data Driven Approaches to Crime and Traffic Safety CASE STUDY

Agency: **Greenville, N.C. Police Department**

Workshop Attended: **Roanoke, VA (January 2013)**

DDACTS Implementation: **January 2013**

Agency Demographic and Background:

The City of Greenville is located in the eastern coastal plains of North Carolina approximately 80 miles east of Raleigh. The city has a population of approximately 90,000 residents and is home to East Carolina University. The city continues to see tremendous growth and is the economic and cultural hub of eastern North Carolina. The city is on pace to reach over 100,000 residents by 2020. Greenville is also home to the Vidant Hospital System, which employs more than 11,000 people throughout Greenville and eastern North Carolina. The City of Greenville has a diverse population. In 2013, our population was comprised of 54.2% white, 36.7% African American, 4.1% Hispanic, and 2.9% Asian residents.

The Greenville Police Department (GPD) is a full-service law enforcement agency that has been on the forefront of community and data driven policing strategies and programs for many years. The police department has a jurisdiction spanning over 25 square miles. At the time of DDACTS implementation, the department was comprised of 189 sworn officers and 58 civilians who responded to 85,336 calls for service in 2012. The initial goal of the department in utilizing DDACTS was to reduce crashes, which in 2012 reached 5,499 and Part I crimes, which before implementation were on the rise as well.

Lessons Learned:

Personnel Component: The Greenville Police Department's DDACTS model utilizes all patrol officers to saturate data identified DDACTS areas. Traffic Safety Officers are an integral part of our model with their focused efforts in DDACTS zones and areas identified as high crash locations. Crime analysis is conducted by our crime analyst and public outreach and education about the model is conveyed through social media and our traditional media partners by the department's Public Information Officer.

Analytical DDACTS Product: Our analytical product includes our crime analyst mapping the DDACTS geographical areas and pushing those products out to the zone commanders, supervisors, and officers. Under our geographical deployment strategy, zone commanders and zone supervisors give specific direction to their officers to patrol and problem solve in crime and crash hot spots in each patrol zone. Monthly, the crime analyst produces statistical reports to track our progress overall, as well as, monitoring the DDACTS areas and other areas to determine if we need to shift our focus based on our crime and crash data.

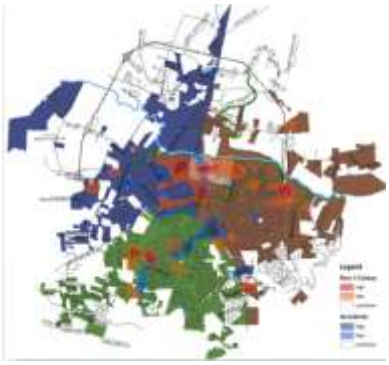
Prior to Implementation:

Before implementation, the City of Greenville was experiencing a growing number of traffic crashes and Part I crimes throughout the city. After attending the Roanoke, Virginia DDACTS workshop in 2012, we immediately returned and mapped the top ten worst crash locations in the city. Starting in January 2013, we implemented our Traffic Crash Reduction Plan by focusing enforcement, education, and partnering with our traffic engineering department at the high crash locations. In 2014, we fully implemented the DDACTS model to reduce crime and crashes in identified DDACTS zones. In 2013, we reduced crashes by 5%, solely using a data-driven approach. Since full implementation in May of 2014, we have seen reductions in both crime and crashes in the identified DDACTS areas in our city.

Pre and Post DDACTS:

While conducting the operational model's guiding principles of data collection and analysis, the department identified four areas where a disproportionate amount of vehicle crashes and crime were occurring, as seen in the maps below:

DDACTS Accidents & Part 1 Crimes Jan. – Dec. 2013 DDACTS Target Area East Zone DDACTS Target Area South Zone



Results:

The Greenville Police Department successfully refocused officers' attention in the two designated "DDACTS zones." The efforts in the first six months following partial implementation resulted in a 28% decrease in Part 1 Crimes and a 13% decrease in crashes in those areas. During this same period, the city had a 14% reduction of Part 1 Crimes and 9% decrease in crashes as seen in the charts below.

6 Months Pre/Post Partial Implementation - City			
Jul. 2012 – Dec. 2012 vs Jan. 2013 – Jun. 2013			
Category	**East**	**South**	**City Wide**
Property Crime	-20%	-29%	-16%
Violent Crime	-50%	-20%	3%
Total Part 1 Crime	**-26%**	**-28%**	**-14%**
Crashes	**-12%**	**-14%**	**-9%**

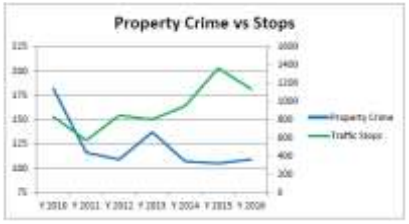
6 Months Pre/Post Partial Implementation – DDACTS Zones			
	Jul. 2012 – Dec. 2012	**Jan. 2013 – Jun. 2013**	**Percent**
East Crime	82	61	-26%
South Crime	272	195	-28%
Total Crime	**354**	**256**	**-28%**
East Crashes	189	167	-12%
South Crashes	272	233	-14%
Total Crashes	**461**	**400**	**-13%**

One year following the full implementation of the DDACTS model resulted in a decrease of Part 1 Crimes in the designated areas by 23%. Overall there was a 16% decrease in Part 1 Crimes and a 3% decrease in crashes city wide. More specifically, violent Part 1 Crimes were reduced by 15%.

12 Months Pre/Post Full Implementation			
Jul. 2013 – Jun. 2014 vs Jul. 2014 – Jun. 2015			
Category	**East**	**South**	**City Wide**
Property Crime	-32%	-24%	-16%
Violent Crime	-8%	5%	-15%
Total Part 1 Crime	**-28%**	**-22%**	**-16%**
Crashes	**6%**	**4%**	**-3%**

12 Months Pre/Post Partial Implementation			
	Jul. 2013 – Jun. 2014	**Jul. 2014 – Jun. 2015**	**Percent**
East Crime	173	124	-28%
South Crime	608	477	-22%
Total Crime	**781**	**601**	**-23%**
East Crashes	376	399	6%
South Crashes	426	443	4%
Total Crashes	**802**	**842**	**5%**

Totals per Year							
EAST ZONE DDACTS	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Violent Crime	14	21	27	20	19	16	12
Property Crime	182	116	109	137	107	105	109
Part1 Crime	**196**	**137**	**136**	**157**	**126**	**121**	**121**
Traffic Stops	831	573	844	800	949	1362	1133
Crashes	388	383	359	341	375	448	416



The Future:

The long-term effect of the agency's efforts to reduce traffic crashes and crime city wide continue to be measured. Greenville Police Command Staff monitor and evaluate the operational and analytical efforts to ensure the department is constantly improving service delivery and sustaining crash and crime reductions. Constant analysis, evaluation, and planning is the key to enduring success in our crash and crime reduction efforts.